CONTENTS

Volume 27, Issue Nos. 1–15

International Journal for

NUMERICAL AND ANALYTICAL METHODS
IN GEOMECHANICS

Issue No. 1, January 2003

Determining soil permeability from pressuremeter tests: D. Rangeard, P. Y. Hicher and R. Zentar 1

Microplane constitutive model for porous isotropic rocks: Z. P. Bažant and G. Zi . . 25

Mohr-Coulomb MiniCLoE model uniqueness and localization studies, links with normality rule: R. Chambon and V. Roger 49

An explicit representation of steady state response of a beam on an elastic foundation to moving harmonic line loads: L. Sun 69

Issue No. 2, February 2003

A simplified analysis method for piled raft foundations in non-homogeneous soils: P. Kitiyodom and T. Matsumoto 85

Use of neural networks for the prediction of frictional drag and transmission of axial load in horizontal wellbores: T. Sadiq, R. B. Gharbi and H. C. Juvkam-Wold . . . 111

A study of the effect of driving on pre-bored piles: M. Mabsout and S. Sadek . . . 133

Short communication: A simulation using a hybrid method for predicting fault zones ahead of a tunnel face: I.-M. Lee and D.-H. Kim 147

Issue No. 3, March 2003

Fast iterative solution of large undrained soil-structure interaction problems: K.-K. Phoon, S.-H. Chan, K.-C. Toh and F.-H. Lee 159

Solid–liquid–air coupling in multiphase porous media: L. Laloui, G. Klubertanz and L. Vulliet 183

The response of an elastic half-space under a momentary shear line impulse: M. Ziv 207

Source signature and elastic waves in a half-space under a momentary shear line impulse: M. Ziv 233

Issue No. 4, 10 April 2003

Modelling of a snowpack in interaction with a flexible structure using a coupled Lagrangian-discrete approach: F. Nicot, O. Gagliardini and B. Boutillier 259

Extension of the Griffith's fracture criteria to saturated clays: K. M. Dégué, M. Soulié and B. Ladanyi 275

Kinematic modelling of shear band localization using discrete finite elements: X. Wang, D. Chan and N. Morgenstern 289

Numerical investigations of shear localization in a micro-polar hypoplastic material: W. Huang and E. Bauer 325

Issue No. 5, 25 April 2003

Direct assessment of structural resistance against pressurized fracture: G. Bolzon and G. Cocchetti 353

Inter-relations between experimental and computational aspects of slope stability analysis: R. Baker 379

A micromechanical study of rolling and sliding contacts in assemblies of oval granules: H. M. Shodja and E. G. Nezami 403

Capturing strain localization behind a geosynthetic-reinforced soil wall: T. Y. Lai, R. I. Borja, B. G. Duvernay and R. L. Meehan 425

Issue No. 6, May 2003

The transfer matrix method applied to steel sheet pile walls: D. A. Kort 453

Development of a technique for modelling clay liner desiccation: Y. Zhou and R. K. Rowe 473

The key-group method: A. R. Yarahmadi Bafghi and T. Verdel 495

A new device for investigating the hydro-mechanical properties of rock joints: J. Hans and M. Boulon 513

Issue No. 7, June 2003

Reinforcing mechanism of anchors in slopes: a numerical comparison of results of LEM and FEM: F. Cai and K. Ugai 549

Numerical solutions for flow in porous media: J. G. Wang, C. F. Leung and Y. K. Chow 565

Large displacement FEM modelling of the cone penetration test (CPT) in normally consolidated sand: E. Susila and R. D. Hryciw 585

Glyph and hyperstreamline representation of stress and strain tensors and material constitutive response: Y. M. A. Hashash, J. I.-C. Yao and D. C. Wotring 603

Short Communication: Correction to the gas phase pressure term in the continuum model for partially saturated granular media presented by Pietruszczak and co-workers: S. M. Iveson 627

Issue No. 8, July 2003

Viscous flow in three-dimensional reconstructed porous media: M. Pilotti 633

A hybrid Bayesian back-propagation neural network approach to multivariate modelling: C. G. Chua and A. T. C. Goh 651

Simplified estimation of seismically induced settlements: E. Vincens, P. Labbé and B. Cambou 669

A two-step Taylor-Galerkin algorithm applied to shock wave propagation in soils: M. Mabssout and M. Pastor 685

Issue No. 9, 10 August 2003

A constitutive model for bonded geomaterials subject to mechanical and/or chemical degradation: R. Nova, R. Castellanza and C. Tamagnini 705

Shear and objective stress rates in hypoplasticity: D. Kolymbas and I. Herle 733

Finite element formulation and algorithms for unsaturated soils. Part I: Theory: D. Sheng, S. W. Sloan, A. Gens and D. W. Smith 745

Finite element formulation and algorithms for unsaturated soils. Part II: Verification and application: D. Sheng, D. W. Smith, S. W. Sloan and A. Gens 767

Issue No. 10, 25 August 2003

A new stereo-analytical method for determination of removal blocks in discontinuous rock masses: Z. Zhang and P. H. S. W. Kulatilake 791

Scaled boundary finite-element analysis of a non-homogeneous axisymmetric domain subjected to general loading: J. P. Doherty and A. J. Deeks 813

Numerical studies of hyperplasticity with single, multiple and a continuous field of yield surfaces: I. Einav, A. M. Puzrin and G. T. Houlsby 837

A new approach for calculating strain for particulate media: C. O'Sullivan, J. D. Bray and S. Li 859

Non-convexity of the Barcelona Basic Model – Comment on S. J. Wheeler, D. Gallipoli and M. Karstunen (2002; **26**: 1561–1571): D. Sheng 879

Issue No. 11, September 2003

Response of saturated porous media to cyclic thermal loading: E. Blond, N. Schmitt and F. Hild 883

On the boundary conditions in slope stability analysis: A. K. Chugh 905

Dynamic response of a soft soil layer to flow and periodical disturbance: P.-C. Hsieh 927

A multi-level parallelized substructuring-frontal solution for coupled thermo/hydro/mechanical problems in unsaturated soil: H. R. Thomas, H. T. Yang, Y. He and P. J. Cleall 951

A local identification technique for geotechnical and geophysical systems: M. Zeghal and C. Oskay 967

Issue No. 12, October 2003

An integral equation solution for three-dimensional heat extraction from planar fracture in hot dry rock: A. Ghassemi, S. Tarasovs and A. H.-D. Cheng 989

Finite element modelling of frictional instability between deformable rocks: H. L. Xing and A. Makinouchi 1005

Elastic half-space under an oblique line impulse: M. Ziv 1027

Scaling improves stability of preconditioned CG-like solvers for FE consolidation equations: G. Gambolati, G. Pini and M. Ferronato 1043

Spatial distribution of safety factors: cohesive vertical cut: R. Baker and D. Leshchinsky 1057

Three-dimensional elasto-plastic model for unsaturated compacted soils with different initial densities: D. A. Sun, H. Matsuoka, H. B. Cui and Y. F. Xu 1079

Issue No. 13, November 2003

Fabric evolution of granular assembly under K_o loading/unloading: J.-C. Liou and Y.-W. Pan 1099

Experience in calibrating the double-hardening constitutive model Monot: M. A. Hicks 1123

Ground response curves for rock masses exhibiting strain-softening behaviour: E. Alonso, L. R. Alejano, F. Varas, G. Fdez-Manin and C. Carranza-Torres 1153

Modelling crack propagation in concrete structures with a two scale approach: K. Haidar, J. F. Dubé and G. Pijaudier-Cabot 1187

Issue No. 14, 10 December 2003

Influence of particle shape and angularity on the behaviour of granular materials: a numerical analysis: C. Nouguier-Lehon, B. Cambou and E. Vincens 1207

Micro-mechanical simulation of geotechnical problems using massively parallel computers: D. W. Washington and J. N. Meegoda 1227

Inclined load capacity of suction caissons: C. P. Aubeny, S. W. Han and J. D. Murff . 1235

Issue No. 15, 25 December 2003

Numerical study of group effects for pile groups in sands: Z. Yang and B. Jeremić . 1255

Application of unconstrained optimization and sensitivity analysis to calibration of a soil constitutive model: Z. Yang and A. Elgamal 1277

The second order characteristic condition for plastic flow: G. Weir and R. Young . . 1299

AUTHOR INDEX 1317

KEY WORD INDEX 1319